

CLAIMS

1. A process for producing a polyether polymer composition, characterized in that at least one kind of agent selected from an antioxidant which is insoluble in an organic solvent and a stabilizer which is soluble in the organic solvent is incorporated in a slurry comprising the organic solvent and a polyether polymer dispersed therein; and then, the organic solvent is removed from the slurry.

2. The process for producing a polyether polymer composition according to claim 1, wherein a solution of an antioxidant is incorporated in the slurry to prepare a slurry having the antioxidant dispersed therein.

3. The process for producing a polyether polymer composition according to claim 1, wherein the stabilizer is at least one kind of compound selected from the group consisting of cyclic amidine salts, hindered phenol compounds, phosphorous acid ester compounds, and fatty acids having at least 5 carbon atoms.

4. The process for producing a polyether polymer composition according to any one of claims 1 to 3, wherein the organic solvent in the slurry is a chain-like saturated hydrocarbon.

5. A polyether polymer composition, characterized by obtainable by a process wherein at least one kind of agent selected from an antioxidant which is insoluble in an organic solvent and a stabilizer which is soluble in the organic solvent is incorporated in a slurry comprising the organic solvent and a polyether polymer dispersed therein; and then, the organic solvent is removed from the slurry.

6. A polyether polymer composition comprising a polyether polymer particle, and at least one kind of agent selected from an antioxidant which is insoluble in an organic solvent incapable of dissolving the polyether polymer particle therein, and a stabilizer which is soluble in the organic solvent, characterized by satisfying at least one of the following three requirements:

(1) at least 50% by weight of the total amount of the antioxidant in the composition is deposited on the surface of the polyether polymer particle,

(2) the polyether polymer has a gel content of not larger than 5% by weight, and

(3) at least 50% by weight of the total amount of the stabilizer in the composition exists within the polyether polymer particle.

7. The polyether polymer composition according to claim 6, which is obtainable by a process wherein at least one kind of agent selected from an antioxidant which is insoluble in an organic solvent and a stabilizer which is soluble in the organic solvent is incorporated in a slurry comprising the organic solvent and a polyether polymer dispersed therein; and then, the organic solvent is removed from the slurry.

8. The polyether polymer composition according to any one of claims 5 to 7, wherein the stabilizer is at least one kind of compound selected from the group consisting of cyclic amidine salts, hindered phenol compounds, phosphorous acid ester compounds, and fatty acids having at least 5 carbon atoms.

9. A solid electrolyte film comprised of the polyether polymer composition as described in any one of claims 5 to 8, and an electrolyte salt compound which is soluble in the polyether polymer composition.